



The Persistence of Prejudice: Voters Strongly Penalize Candidates with HIV

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Abstract

Forty million people around the world and more than one million in the United States live with HIV. Despite the gains in the prevention and treatment of HIV due to medical advances and community advocacy, HIV/AIDS continues to claim lives and disproportionately affect marginalized communities. Stigma against people with HIV remains powerful. While individuals with HIV have gained some visibility in the media, the scarcity of politicians with HIV is striking. This article analyzes a possible reason: voter bias. We examine voters' reactions to political candidates with HIV using original nationally representative survey experiments from the United States, the United Kingdom and New Zealand. Voters penalize candidates with HIV by 10–12 percentage points in the three countries. Prejudice, electability concerns, and the moral judgment that candidates are responsible for their HIV+ status explain bias. The lack of descriptive representation remains an obstacle to improved policy outcomes for this marginalized community.

Keywords HIV · AIDS · Representation · Candidates · Voter bias · Minority groups

There is a striking dichotomy at the heart of the HIV/AIDS epidemic in 2020. Over the last thirty years, the medical and advocate communities have combined to make enormous gains in the spread, treatment, and management of HIV. But where knowledge and medicine are scarce, the epidemic continues unabashed. AIDS-related illnesses still claim hundreds of thousands of lives every year around the world. HIV disproportionately affects gay and bisexual men and racial and ethnic minorities.

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Stigma against people with HIV remains pernicious even where the condition is being medically managed.

HIV/AIDS has claimed the lives of 32 million people since it was first identified in the 1980s. After a devastating lack of government attention around the globe, the fight against HIV/AIDS reached a turning point in 1995 with the development of highly active antiretroviral therapy protease inhibitors. Twenty-five years later the vast majority of people carrying the virus are able to live healthy lives *if* they have access to the appropriate treatments. Undetectable loads of the virus are untransmittable and pre-exposure prophylaxis (known as PrEP) is today a highly effective way to prevent new HIV infections. Global death rates declined by one-third between 2010 and 2018. In the UK, diagnoses declined by 73% between 2014 and 2019.¹

Despite progress in pockets of the wealthy global north, HIV continues to destroy lives in many regions of the world. There were approximately 38 million people living with HIV/AIDS in 2019, the majority of those in sub-Saharan Africa. Since 2010, there has actually been a 29% increase in new infections in Eastern Europe and Central Asia, a 10% increase in the Middle East and North Africa, and a 7% increase in Latin America (UNAIDS).

While the lack of access to treatment still has devastating effects, those living productive lives with HIV in advanced democracies have become more visible. Celebrities with HIV are slowly emerging from the shadows and changing perceptions of life with the virus. Yet, politicians publicly living with HIV remain a rarity. For a long time powerful bias has prevented people with HIV from being considered legitimate decision makers.

The fact that in 2020 there are only three people openly living with HIV serving in national office anywhere in the world illustrates the tenacity of prejudice in politics. Ryūhei Kawada became a member of the Japan's House of Councilors, the upper house of the legislature, in 2007². Aldo Davila was elected on the Winaq Movement list in Guatemala in June 2019 and finally took office in January 2020³. Labour Member of Parliament (MP) Lloyd Russell-Moyle had been elected for the UK constituency of Brighton Kemptown in 2017, but did not talk publicly about his HIV+ status until World AIDS Day in November 2018⁴. His re-election in December 2019 was a milestone. The paucity of representation in public office, however, remains extreme. There are less than ten elected officials openly living with HIV in the US at any level of government⁵, and roughly the same number in the rest of the world combined. Those missing voices are unable to shape public policy and perceptions.

What explains such lack of representation? We argue that negative voter bias toward politicians with HIV is part of the answer. We conducted original survey

¹ BBC, 16 January 2020: <https://www.bbc.com/news/health-51122979>.

² World Economic Forum: <https://www.weforum.org/people/ryuhei-kawada>.

³ <https://www.seattletimes.com/nation-world/nation/aldo-davila-set-to-be-guatemalas-1st-openly-gay-congressman/>.

⁴ The Seattle Times, 20 June 2019: <https://www.bbc.com/news/uk-england-sussex-46391287>.

⁵ POZ, 29 October 2014: <https://www.poz.com/article/hiv-positive-politics-26343-5691>.

experiments with nationally representative samples from the United States, the United Kingdom and New Zealand to examine voters' reaction to candidates with HIV running for office. In each country, candidates with HIV face electoral penalties that are between 10 and 12 percentage points. Country differences are limited, but candidates with HIV incur relatively smaller disadvantages in the UK, the only country of the three with an openly HIV-positive MP. We also investigate differences across voters along party lines, ideology, religiosity, gender, and age. While significant subgroup differences do not emerge, we find that voters display less negative attitudes toward candidates with HIV when such candidates cannot be considered responsible—and consequently blamed—for their status. In addition to moral judgment, outright prejudice and electability concerns explain voters' opposition.

Voter Negative Bias against Candidates from Stigmatized Groups

Stigmatized social groups are under-represented in politics, in part, because of voter biases against given outgroup identities. Hostility against religious, ethnic, or racial minority groups negatively affects the electoral chances of candidates from these groups. Voters, in particular, strongly discriminate against Muslim candidates. In the 2010 UK election, Muslim candidates diminished party vote on average by 8%, compared to 4% for ethnic minority candidates (Fisher et al. 2015). In the US, Muslims experience voter bias regardless of whether they are African-American or Arab-American. Negative bias is especially pronounced among people with strong cultural outgroup antipathy (Kalkan et al. 2018).

A vast literature has explored the impact of candidates' race and ethnicity on voter choice. Some studies found that voters in the US do not discriminate against Black candidates because of their race (Highton 2004; Sigelman et al. 1995; Voss and Lublin 2001). However, others showed that white voters are less likely to support Black candidates (Moskowitz and Stroh 1994; Reeves 1997; Terkildsen 1993) and to participate if Black candidates are in the race (Gay 2001). Studies also showed that race negatively affected Barack Obama's results in 2008 (Huddy and Feldman 2009; Piston 2010).

Conversely, some minority voters are more supportive of candidates of the same ethnic group (Barreto 2010; Bobo and Gilliam 1990; Collet 2005; Gay 2001; McConaughy et al. 2010). For instance, Black voters in the US are often more likely to vote for candidates of their own group (Adida et al. 2016), and so are Pakistani-British voters in the UK (Fisher et al. 2015) and Muslim voters in India (Heath et al. 2015). Recent work has also focused on intersectionality, highlighting how women and LGBTQ candidates of color face unique biases and sometimes advantages among voters (Bejarano 2013; Gershon et al. 2019; Gershon and Lavariega Monforti 2019; Magni and Reynolds 2020; Philpot and Walton 2007).

Candidates' sexual orientation and gender identity have received greater attention in recent years. LGBTQ candidates often face discrimination at the ballot box, with a penalty especially severe for transgender candidates (Haider-Markel 2010; Haider-Markel et al. 2017; Jones and Brewer 2019; Loepp and Redman 2020; Magni and

Reynolds 2020)⁶. One reason is that voters use sexual orientation and gender identity as political cues. They believe that LGBTQ candidates are, on average, more progressive than their straight counterparts, which elicits penalties among some voters (Gołębiowska 2001,2003; Jones and Brewer 2019). Recent work shows that electability concerns and prejudice also play a decisive role in making voters less likely to support candidates who are gay, lesbian and transgender (Magni and Reynolds 2020).

Work focused on candidates who are HIV-positive is much more limited. Our expectation is that the degree of penalty visited on candidates living with HIV will be comparatively high due to the persistently high magnitude of stigma against HIV+ people in society. Below we develop our argument.

Voter Negative Bias against Candidates with HIV

We expect politicians with HIV to face strong negative voter bias. For a long time, people with HIV/AIDS have been politically isolated (Epstein 1996). Advanced democracies failed to implement effective measures against the epidemic and governments enacted discriminatory behaviors against people with HIV/AIDS (Bosia 2006; Gant 2010). Forty years after the start of the epidemic, the Trump administration used HIV as a justification to separate migrant families at the southern border⁷.

These actions have marginalized people living with HIV/AIDS, promoting disgust and social distancing. Repulsion toward people with HIV/AIDS goes beyond the simple fear of infection and prompts avoidance of even indirect contact (Rozin et al. 1994). HIV-related stigma is especially strong because of misinformation about the risks of transmission (Herek et al. 2002). A 2019 Merck study found that 50% of American millennials erroneously believed the virus could be transmitted when someone was undetectable. Furthermore, HIV/AIDS stigma is deeply rooted because it builds upon stigma affecting already marginalized communities who have disproportionately suffered from the virus, such as gay men, sex workers, and drug users (Land and Linsk 2013; Voisin et al. 2013).

HIV stigma remains widespread decades after the start of the epidemic. A large share of the population still exhibits concerns about occasional encounters, avoids personal contact, and blames individuals with HIV for their condition (Beaulieu et al. 2014; Bogart et al. 2008). A 2017 survey of 18–30 year old Americans found that 51% would be uncomfortable having a roommate with HIV and 58% would be uncomfortable having their food prepared by someone with HIV⁸. Still in 2019, 28% of American millennials avoided hugging, talking to, or being friends with someone

⁶ However, Magni and Reynolds (2018) found that voters did not penalize gay and lesbian candidates in the 2015 UK election.

⁷ Washington Blade, 25 July 2019: <https://www.washingtonblade.com/2019/07/25/trump-administration-hiv-status-used-to-justify-family-separation-at-border/>.

⁸ Kaiser Family Foundation, 30 November 2017: <https://www.greaterthan.org/press-release-national-survey-of-young-adults-on-hiv-aids/>.

with HIV⁹. These perceptions are often reinforced by government policies. In the US, HIV-positive soldiers are not allowed to deploy, and in 2019, some HIV-positive members of the Air Force were discharged because of their status¹⁰.

Stigmatized groups are seen as less likeable (Weiner et al. 1988) and stimulate social distance and rejection (Feldman and Crandall 2007). As a result, given the enduring stigma surrounding people with HIV, we expect that a significant number of voters will reject politicians with HIV.

Moderators of Bias: Responsibility and Blame

While prejudice against individuals with HIV remains strong, one factor has the potential to moderate it. We draw on the attribution theory of responsibility to argue that the (perceived) cause of candidates' HIV+ status affects voters' reactions.

Negative evaluations are more severe toward individuals who are considered responsible for their situation. When someone's illness is seen as the result of one's voluntary behavior, blame and stigma increase. Attribution of responsibility helps explain variation in attitudes toward marginalized groups, including welfare recipients (Weiner 1993), gays and lesbians (Haider-Markel and Joslyn 2008)¹¹, and people with HIV/AIDS (Weiner et al. 1988). People with HIV/AIDS are blamed and considered less deserving of help if AIDS is seen as the result of promiscuous sexual behavior rather than fetal transmission (Weiner et al. 2011).

Attribution of responsibility therefore may mold considerations of candidates' character and morality¹². We anticipate greater hostility toward candidates with HIV who are considered responsible for their condition. In contrast, we expect prejudice to be less pernicious toward candidates with HIV who are seen as not responsible for their status.

Electability Concerns

Prejudice may not fully explain voters' reluctance to support candidates with HIV. Some voters may not be personally negatively predisposed toward candidates with HIV, but may worry that such candidates will face an uphill electoral battle given the widespread stigma. Hence, we expect electability concerns to also drive voters' negative bias.

In general, minority candidates suffer from heightened electability scrutiny. This is the case for women, ethnic minorities, and LGBTQ candidates (Magni and Reynolds 2020; Teele et al. 2018). Voters also tend to reward political experience,

⁹ Merck, 25 November 2019: <https://www.multivu.com/players/English/8614851-merck-owning-hiv/>.

¹⁰ The Washington Post, 5 August 2019: <https://www.washingtonpost.com/opinions/2019/08/05/discriminating-against-hiv-positive-military-members-is-unproductive-our-military/>.

¹¹ Positive feelings toward gays and lesbians and support for gay rights are higher when people think that homosexuality is biological or genetic (Haider-Markel and Joslyn 2008).

¹² Relatedly, voters in the US and Canada are less likely to support candidates facing depression because depression affects perceptions of candidates' character (Loewen and Rheault 2019).

a characteristic seen as bolstering electability (Horiuchi et al. 2020a, b). However, very few openly HIV+ candidates have ever been elected to national parliament anywhere in the world.

The lack of visibility of people with HIV is not limited to political leadership. For years people with HIV have been absent from media representation—or they have been depicted in a stereotypical or dehumanizing way. Still today, the representation of individuals with HIV in a sympathetic light remains limited. It is often confined to productions specifically focused on HIV/AIDS, such as documentaries *We Were Here* and *How to Survive a Plague* and theatre and movie productions *Angels in America*, *The Normal Heart*, and *Inheritance*.

Descriptive representation in politics and increased visibility in the media have played a role in reducing negative bias toward marginalized communities and sexual minorities (Ayoub and Garretson 2017; Flores 2015; Garretson 2015; Reynolds 2019). But the still limited visibility of people with HIV makes it harder for them to overcome negative bias. If voters do not see people with HIV in positions of power, they are less likely to believe that such politicians can succeed – and more likely to believe that other voters are not ready to embrace them.

Case Selection

We explore voters' attitudes toward politicians with HIV in three countries: the United States, the United Kingdom and New Zealand. These countries use single-member district electoral systems¹³, in which citizens vote for specific candidates rather than party lists. Focusing on electoral systems where voters normally choose candidates increases the realism of our study, because our empirical approach – described below – requires respondents to vote for their preferred candidates.

As noted, visibility in the political realm remains extremely rare. There have been a handful of out HIV+ parliamentary candidates in the US and the UK, but none to our knowledge in New Zealand. The only parliamentarians in our three cases open about their HIV status are British MP Lloyd Russell-Moyle and British Lord Chris Smith. In the US, there have been a few politicians openly living with HIV at the state and local level¹⁴. Those in office at the beginning of 2021 are Corey Johnson (D), elected to the New York City Council in 2014 and Speaker since 2018; Greg Harris (D), a member of the Illinois House of Representatives since 2007 and majority leader since 2019¹⁵; and Roger Montoya (D), newly elected member of the New Mexico House of Representatives.

With regard to HIV prevalence in the general population, the incidence is lowest in New Zealand and highest in the United States. In 2018, UNAIDS listed the adult rate of HIV infections at 0.3% in the US, 0.2% in the UK, and less than 0.1% in New

¹³ Partially in the case of New Zealand.

¹⁴ Stewart McKinney represented Connecticut's fourth District in the House of Representatives (1971–87).

¹⁵ Sean Strub, a longtime HIV/AIDS activist, became mayor of Milford, PA in 2017.

Zealand. In 2017, the US recorded 1.85 HIV/AIDS deaths per 100,000 people, the UK 0.35 per 100,000, and New Zealand 0.21¹⁶.

Our three cases also offer some variation with regard to HIV/AIDS policies. After decades of devastating inaction and state marginalization, treatment has improved dramatically in the UK and New Zealand. An estimate of 18,000 people in Britain and 2500 in New Zealand are on PrEP. The drug is widely available and national health services provide robust treatment. While the number of individuals on PrEP is overall higher in the US, the drug availability is more fragmented, inasmuch as the US healthcare system places barriers to care for many of the populations most affected by HIV. Without health insurance, the list price for Truvada (one of the most popular PrEP drugs) was almost \$2000 for a 30-day supply in 2020¹⁷. As a result, while white gay men have progressively accessed HIV medication, HIV risk has reached an all-time high in the Black gay community in the United States¹⁸.

Despite the medical gains, stigma remains widespread in the three countries. As described, about one in two Americans would be uncomfortable having a roommate with HIV and about three in five with having their food prepared by someone with HIV. In 2018, 88% of New Zealanders said they would be uncomfortable having a sexual relationship with someone living with HIV. Forty-six percent were uncomfortable letting a child play with another child living with HIV, and 38% were uncomfortable having a housemate living with HIV¹⁹. At the same time, a survey in the UK found that almost half (48%) would feel uncomfortable kissing someone with HIV, while 38% would feel uncomfortable going on a date with someone who is HIV positive²⁰.

Empirical Approach

We conducted online surveys in fall 2018 with 1829 respondents in the United States, 1122 in the United Kingdom, and 1287 in New Zealand²¹. Participants were drawn from online panels of respondents recruited by the company Cint through convenience sampling methods. In each country, we collected nationally representative samples, which mirrored census quota for gender, age, location of residence, and education.

¹⁶ As a comparison, Lesotho recorded 336 deaths per 100,000 in the same year: <https://ourworldindata.org/hiv-aids#in-some-countries-hiv-aids-is-the-cause-of-more-than-1-in-4-deaths>.

¹⁷ Healthline, 21 April 2020: <https://www.healthline.com/health-news/cost-of-hiv-prevention-drug-dissuading-people-from-doing-prep-therapy>.

¹⁸ The Guardian, 1 June 2018: <https://www.theguardian.com/world/2018/jun/01/silent-epidemic-black-gay-men-in-us-face-50-50-risk-of-hiv>.

¹⁹ New Zealand Doctor, 28 November 2018: <https://www.nzdoctor.co.nz/article/undocumented/new-hiv-stigma-stats-cause-immediate-action>.

²⁰ Terrence Higgins Trust, 4 July 2019: <https://www.tht.org.uk/news/almost-half-brits-would-feel-uncomfortable-kissing-someone-hiv>.

²¹ Data and replication code are available on Dataverse at: <https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/UIF9BL>.

To measure voter attitudes toward candidates with HIV, we embedded a conjoint experiment in each survey. Conjoint experiments present respondents with alternative options combining several attributes randomly varied across participants, and ask respondents to choose the option that they prefer. Conjoint analysis allows researchers to causally estimate the relative effect of each attribute on respondents' choices.

The conjoint design is especially appropriate to examine our research questions. Political candidates generally have many features that may attract or reject voters. This makes it hard to isolate which candidates' characteristics mostly influence voters' choice. The challenge is magnified because attributes are often correlated (Horiuchi et al. 2018). For instance, some voters may assume that a candidate with HIV is a gay man, given the historical association between HIV/AIDS and the gay male community. The conjoint design allows us to disentangle the effect of correlated attributes and evaluate their marginal importance. The focus on hypothetical rather than actual candidates in the conjoint experiment also allows us to measure the impact of specific attributes, such as living with HIV, abstracting from real-life candidates who possess them (Horiuchi et al. 2018).

Measuring voter attitudes through surveys presents several challenges, which we address with our approach. First, survey measures carry the risk of eliciting socially acceptable answers. The conjoint design, however, likely reduces social desirability concerns (Hainmueller et al. 2014; Horiuchi et al. 2020a, b). This is because conjoint designs offer multiple ways for respondents to internally justify their choice. For instance, a respondent who dislikes candidates with HIV may vote against such candidates with less fear of appearing prejudiced, since the respondent would be able to explain their choice based on other candidate characteristics, such as political experience or religiosity.

Second, one may question whether our findings can be generalized to real elections, where candidates strive to control which personal characteristics they want to emphasize. While this is true for some aspects (e.g. candidate's religiosity), it is less of a concern for a study focused on candidates *openly* living with HIV. Such candidates are particularly visible, as revealed by the hyped media attention in the UK for 2015 candidates Adrian Hyrylainen-Trett, Paul Childs, and David Kirwan, and for MP Lloyd Russell-Moyle, when he came out as positive on World AIDS Day in 2018. In the US, media outlets and social media accounts have highlighted Speaker Corey Johnson's HIV status²², while conservative opponents in New Mexico viciously attacked Roger Montoya²³.

The post-experiment questionnaire collected information on respondents' demographics and socio-economic condition, including participants' age, gender, sexual orientation, education, income, religiosity, political ideology, partisan identity, and

²² See, for instance, The New York Times, 3 January 2018: <https://www.nytimes.com/2018/01/03/nyregion/council-speaker-corey-johnson.html>.

²³ Metro Weekly, 12 November 2020: <https://www.metroweekly.com/2020/11/roger-montoya-wins-election-after-republicans-attack-gay-adult-film-past/>.

whether respondents have LGBT family members or friends. The questionnaire also included an attention check to isolate inattentive respondents.

Experiment Design

We designed nearly identical conjoint experiments in which survey respondents voted for their preferred candidate among hypothetical alternatives within their own party, similarly to a primary election. To keep party ID constant, we told respondents that the party for which they were more likely to vote for was considering those individuals as candidates for the House in their district in national elections. We can therefore evaluate the effect of candidates' personal background on intra-party competition. This is important because if individuals from minority groups cannot emerge as general election candidates for their party, descriptive representation of marginalized groups will continue to languish.

We presented respondents with five pairs of candidates. For each candidate we randomized eight socio-demographic characteristics across survey participants: health, gender, race/ethnicity, age, religion, sexual orientation, education, and political experience (Table 1). With regard to health, some candidates were described as having no chronic health condition, others as being HIV+ and still others as HIV+ since birth²⁴. This allows us to differentiate between candidates who are born HIV+ versus those who contracted the virus later, and, as a result, might be considered by some to be culpable for their condition. We also included two additional health conditions, one non-attributable to candidates' behavior (using a wheelchair because of birth condition) and one potentially attributable (being overweight with diabetes).

We introduced the candidates to respondents with the following statement: "Imagine that the party you are more likely to vote for is considering the following two people as possible candidates for the House of Representatives in your district. Then answer the questions below about these candidates." After each pair, respondents answered the question: "Which of these two candidates would you be more likely to vote for?"²⁵ We then asked two additional questions to investigate the reasons behind possible voters' bias toward candidates with HIV: "In your opinion, which of these two candidates... (i) ... would you prefer to have as a neighbor? (ii) ... has better chances to win the election?" These questions measure prejudice and electability concerns, i.e. the reticence to vote for candidates because they are perceived to have a smaller chance to win.

To analyze the results, we ran OLS regressions with cluster-robust standard errors because each respondent evaluated several pairs of candidates. Since the attribute levels are independently randomized from one another, OLS produces unbiased and consistent estimates of the average marginal component effects, or AMCEs (Hainmueller et al. 2014; Horiuchi et al. 2018, pp. 199). Given that the units of analysis in

²⁴ A small number of respondents saw a candidate who was 71 years old and HIV positive from birth. Upon reflection, this is implausible, but the number of respondents who saw this combination was very small, and none of our 4300 participants mentioned the potential anomaly. Furthermore, as a robustness check, we conducted the analysis eliminating candidates who were 71 years old. Results remain substantially unchanged. See footnote 25.

²⁵ The online appendix reports an example of the experiment displayed to survey respondents in the United States (page A4).

the conjoint experiment are the individual candidate characteristics, we can evaluate marginal effect and relative importance of each attribute level.

Results

Voters strongly penalize politicians with HIV. Compared to candidates with no chronic health condition, those who are HIV+ are 11.9 percentage points less likely to be chosen in the US, 10.9 in the UK, and 12.5 in New Zealand (Fig. 1). Differences between countries are therefore limited, but the penalty is slightly weaker in the UK, the only country of the three with an openly HIV+ member of parliament. Candidates with HIV face some of the strongest electoral penalties in the three countries. Their penalty is similar in size to the disadvantage faced by candidates who are transgender, are Muslim, or did not graduate high school, and more severe than the penalty for gay candidates. In contrast, voters strongly reward candidates with previous experience in office. This suggests a double lock against candidates with HIV, who are much less likely to have experience as elected officials.

Our results also show that the penalty is less strong for candidates who have been HIV-positive since birth than those who are simply described as HIV+ (−8.1% points in the US, −5.5 in the UK and −6.7 in New Zealand)²⁶. Voters are therefore less negatively oriented toward candidates who were born with HIV and cannot be blamed for their status. This is consistent with Weiner's attribution theory of responsibility, which predicts that stigma is weaker if individuals are not responsible for their condition. While the data at hand do not allow us to delve further into the analysis, this may be related to the moral assessment of candidates' characters, which plays a role in shaping attitudes toward candidates with health conditions (Loewen and Rheault 2019). Some voters may express a moral judgment in rejecting candidates who have become HIV+ later in life, perhaps linking the acquisition of HIV with unprotected sex or drug use²⁷.

The results for other health conditions offer further support to the role played by attribution of responsibility and negative stigma in voter choice. In the three countries, candidates who are overweight with diabetes face penalties as strong as those incurred by candidates with HIV (−9.3 percentage points in the US, −11.3 in the UK and −13 in New Zealand). Indeed, stigma against overweight individuals remains strong in society (Latner et al. 2008; Oliver and Lee 2005; Puhl and Heuer 2009), and previous work found that voters rate obese candidates more negatively than average-weight candidates (Miller and Lundgren 2010; Roehling 2014). In contrast, candidates using a wheelchair because of birth condition face less severe penalties (−4.5 percentage points in the US, −2.6 in the UK and −2.7 in New Zealand). Part of the reason is likely due to the fact that these candidates cannot be considered responsible for their condition, while overweight individuals are often deemed personally responsible (Oliver and Lee 2005).

To examine variation in attitudes toward candidates with HIV across groups of voters, we then use subset analysis. First, we split the sample into relevant subsets and

²⁶ When we eliminate candidates who are 71 years old, candidates with HIV face the following penalties: −11.4 percentage points (US), −10.4 (UK), −13.5 (NZ). Candidates with HIV since birth: −8.2 percentage points (US), −5 (UK), −7 (NZ).

²⁷ As we explain below, a few respondents mentioned this point.

Table 1 Candidates and attribute levels

Age	35; 44; 56; 71
Political experience*	No previous experience; Member of state legislature; Member of the U.S. House of Representatives
Health	Healthy; On a wheelchair since birth; Overweight, has diabetes; HIV positive; HIV positive since birth
Sexual orientation	Straight; Gay
Religion	Christian; Muslim; Jewish; Not religious
Race**	White; Black; Latino; Asian; Native American
Education	Less than high school; High school degree; College degree; Master degree
Gender	Male; Female; Transgender

*Political experience: in the UK: No previous experience; Town council member; Member of the House of Commons. In New Zealand: No previous experience; Town council member; Member of the House of Representatives

**Race: in the UK: White; Black; Asian. In New Zealand: White; Maori

compare average AMCEs between subgroups. Second, we calculate subgroup marginal means – which correspond to the probability that respondents chose candidates with a specific attribute – and report subgroup marginal mean differences. The advantage of marginal means is that they are not sensitive to the baseline levels within attributes (Leeper et al. 2020).

The results of the analysis reveal that subgroup differences are minimal and inconsistent. Across subgroups of voters, the penalty for candidates with HIV remains strong (Table 2). Religiosity, age, partisan identity, and having LGBT friends do not generate significant differences²⁸. Marginal mean differences show that conservatives in the UK and New Zealand are more likely to vote against HIV+ candidates, while in the US liberals exhibit a stronger negative bias. Women's attitudes are more negative than men's in the US, but the opposite is true in the UK. Persistent and widespread stigma in the population toward individuals with HIV

²⁸ Recent work found that opposition to candidates from stigmatized groups is often driven by ethnocentrism or generalized antipathy toward cultural outgroups (Kalkan et al. 2018). Our survey does not include measures of ethnocentrism. However, we do have questions measuring contact or attitudes toward specific outgroups. One question asks whether respondents have LGBTQ friends or family members. This item measures close contact with LGBTQ people, which, in turn, can be expected to affect feelings and attitudes toward LGBTQ individuals. Table 3 reveals that respondents with LGBTQ friends or family members penalize candidates with HIV less severely in all the three countries than respondents without LGBTQ friends, even though the difference fails to reach statistical significance. Our American survey also includes an item measuring immigration attitudes, which asks respondents whether the number of immigrants in the countries should be reduced or increased. While the question does not directly measure affect toward immigrants, one could hypothesize a correlation between immigration attitudes as measured by this item and affect toward immigrants. Hence, we conducted a subset analysis to explore voter attitudes toward candidates with HIV for respondents who would like to reduce the number of immigrants and those who do not. Similarly to the subset analysis based on LGBTQ friends and family members, respondents with negative immigration attitudes penalize candidates with HIV more severely than respondents with positive immigration attitudes, but the difference is not statistically significant. The AMCEs for candidates with HIV are -13.2 [$-16.3, -10.1$] and -10.5 [$-13.6, -7.5$] for respondents with negative and non-negative immigration attitudes, respectively. The marginal means are 41.8 [39.1, 44.5] and 43.7 [41.1, 46.4].

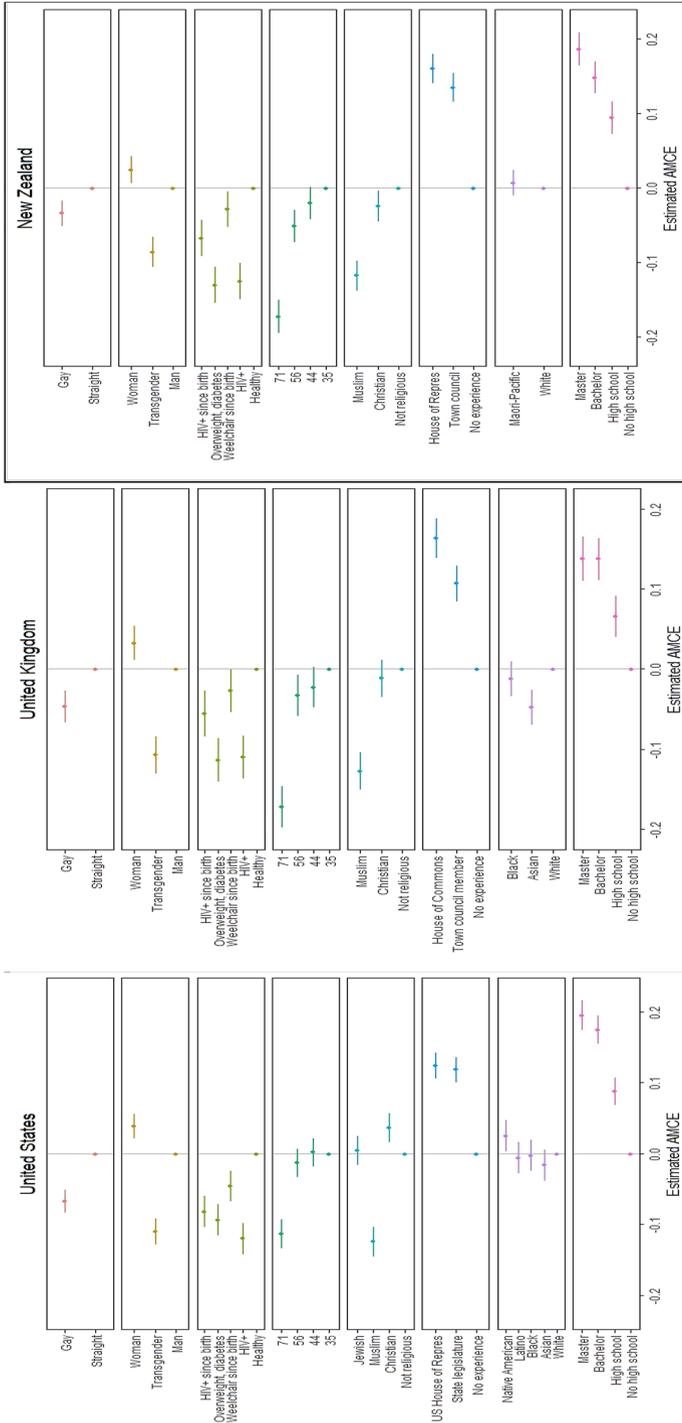


Fig. 1 Candidate vote choice in the United States, the United Kingdom and New Zealand

Table 2 Bias toward HIV+ candidates across subgroups of voters in the United States, the United Kingdom and New Zealand

Subgroup of voters	US			UK			NZ		
	Penalty compared to healthy candidate (AMCE)	Vote probability for HIV+ candidate (MM)	Difference in vote probability (MM difference)	Penalty compared to healthy candidate (AMCE)	Vote probability for HIV+ candidate (MM)	Difference in vote probability (MM difference)	Penalty compared to healthy candidate (AMCE)	Vote probability for HIV+ candidate (MM)	Difference in vote probability (MM difference)
Democrats ⁺	-15.1%***	40.5%	-2.6% [-6.4, 1.3]	-11%***	43.9%	1.4%	-10.3%***	44.1%	1.8%
Republicans ⁺⁺	-10.3%***	43.1%		-13.1%***	42.5%	[-3.6, 6.4]	-13.3%***	42.3%	[-2.6, 6.2]
Liberals	-12.9%***	42.4%	-4.5% [-9.2, -0.2]	-2.6%	50.7%	8.3%	-8.3%***	45.7%	5.5%
Conservatives	-6.8%**	46.8%		-14%***	42.5%	[1.7, 14.8]	-17.7%***	40.2%	[0.3, 10.7]
LGBT friends	-11.4%***	43.4%	1.1%	-8.3%***	45.3%	2.2%	-11.9%***	42.6%	0.6%
No LGBT fr	-12.4%***	42.2%	[-2.1, 4.3]	-12.1%***	43.1%	[-2.1, 6.4]	-13%***	42%	[-3, 4.1]
Women	-13.7%***	40.9%	-4%	-8.4%***	46.9%	6.1%	-12.9%***	41.9%	-0.7%
Men	-10%***	44.9%	[-7.2, -0.8]	-13.8%***	40.7%	[2.1, 10.2]	-12.4%***	42.7%	[-4.3, 2.8]
Not religious	-11.2%***	44.1%	1.2%	-9.2%***	45.3%	1.8%	-11.7%***	42.7%	-1.5%
Religious	-10.8%***	42.9%	[-2.9, 5.3]	-10.8%*	43.6%	[-4.9, 8.4]	-12%***	44.2%	[-6.8, 3.8]
<35 years old	-12.2%***	43.4%	0.4%	-11.1%***	44.4%	0.3%	-9.7%***	43.4%	3%
>60 years old	-12.5%***	43.1%	[-3.8, 4.5]	-11.7%***	44.1%	[-5.2, 5.8]	-16.2%***	40.4%	[-1.7, 7.6]

may help explain why subgroup differences toward HIV+ candidates are more limited than those previously observed toward gender, sexual and racial minority candidates.

We now explore whether and to what extent prejudice and electability concerns drive voters' negative bias toward candidates with HIV. In all countries, respondents dislike having candidates with HIV as neighbors. Respondents are less likely to welcome neighbors with HIV compared to neighbors with no chronic health conditions by 6–7 percentage points. This is evidence of outright prejudice against politicians with HIV. With regard to neighbor preferences, voters do not significantly differentiate between candidates who have been HIV+ since birth or not.

Electability concerns about candidates with HIV are even more acute. When asked about which candidates have better chances to win elections, voters are less likely to pick candidates if they are HIV+ by 9.1 percentage points in the US, 6.1 in the UK and 12.5 in New Zealand. Voters, therefore, strongly believe that candidates with HIV face a harder path to elected office. Electability concerns are relatively less strong in the UK, the only country with an openly HIV+ member of parliament (although his official announcement occurred just after our survey was conducted). Interestingly, electability concerns are smaller when candidates were born with HIV (−5.8 in the US, −6.1 in the UK and −8.1 in New Zealand). This arguably offers further evidence on the link between responsibility attribution and moral evaluations of candidates. Those who can potentially be blamed for being HIV+ may be considered less fit for office and therefore less electable.

HIV and Vote Choice in the Words of Respondents: A Look at Open-Ended Questions

To further examine the impact of HIV on vote choice, we included an open ended question in our surveys, which asked: “Think about the characteristics of the candidates that we showed you: gender, religion, age, health, sexual orientation, education, race/ethnicity, and political experience. Can you briefly tell us what information, in general, has led you to decide which candidates you would be more likely to vote for?” About 99% of our respondents answered the question. Across the three cases, about 10–15% of respondents volunteered that ‘health’ was a factor in how they choose between pairs of candidates. The large majority of these voters revealed that they saw ‘poor health’ or ‘unhealthiness’ as a reason to reject a candidate.

In New Zealand, 190 respondents (14.8%) mentioned health as a factor in their decision. 45% of those mentions were explicitly negative, while another half merely mentioned ‘health’ as a factor in their choice. Only two respondents explicitly said they thought a candidate with a health condition was preferable. In the United Kingdom, 118 respondents (9.6%) mentioned health as a factor. Of those, 68 just mentioned health, 48 were negative, and two positive. In the US, there were 187 (10.2%) mentions of health as a factor: 117 neutral mentions, 67 negative, and three positives.

While health was a factor in the vote choice of a significant number of respondents, far fewer explicitly referred to HIV. In the US, fifteen respondents (0.8%) mentioned HIV; three merely mentioned HIV as a factor in their decision, ten indicated

it was a liability, while two said that being HIV positive was a reason to vote *for* a candidate. In the UK, among the twelve (1%) mentions of HIV, nine were negative and three positive. In New Zealand, there were nine (0.7%) mentions: four negative, three positive, and two just indicated HIV as a factor in their choice. Overall, therefore, around a fifth of the 36 respondents who mentioned HIV said they were *more* inclined to vote for a candidate living with HIV.

Even though explicit mentions of HIV status as a factor were rare, they were more common than mentions of overweightness (20 across three cases) or wheelchair usage (21 overall). There were few patterns connecting the respondents who mentioned HIV as a factor in their vote choices. A slight majority of those who said they would *not* vote for a candidate with HIV were men (thirteen as opposed to ten women), while women were the majority in the group more likely to vote *for* a candidate because they were HIV positive (six compared to two men).

The open-ended responses illustrate the concerns that we posited were driving vote bias against candidates living with HIV. Some respondents expressed unvarnished prejudice. A British respondent wrote: “HIV+ I assume [sic] has poor morals, caught through drugs or sex.” An American participant wrote: “I was less likely to vote for candidates who were HIV positive as this might suggest promiscuity.” One New Zealander offered the trope, “Some had hiv positive [sic] and you wouldn’t want them to come in contact with other people.” Electability concerns were also on respondents’ minds. A British voter expressed his personal support for candidates with HIV, but also noted that “most would not vote for them on the basis of this infection.” Respondents also distinguished between candidates who acquired HIV at birth or later in life, such as in the case of a respondent from New Zealand: “HIV positive was very negatively viewed [...] Excluding the individual with HIV+ from birth [sic].”

Two more themes emerged from the open-ended answers: concerns about the ability of candidates with HIV to perform the job; and, conversely, appreciation for their struggles. Regarding capacity concerns, a respondent in the UK wrote: “Someone who is HIV Positive may be fine for a while, but then may suddenly experience a number of Health Problems which would render them unable to carry out their Duties.” In New Zealand, one worried: “Some candidates are diagnosed with HIV which will lead to a shorter lifespan.” In the US, a respondent noted: “HIV positive people might not live as long as their contemporaries [sic],” and another said: “Actually it’s a bit complicated to choose a candidate who has hiv [sic] because of his health conditions, maybe that can affect him at work.”

Those who reported that being HIV positive was a reason to vote *for* a candidate emphasized their grit and likely empathy. For example: “People who have experienced hardship are likely to be more empathetic. Someone who is trans or HIV positive is more likely to be understanding of others” (respondent from New Zealand). “The hiv status [sic] is proof that is [sic] a stronger person” (respondent from the US). “I believed that his life experience with HIV would make him more attuned to the issues of people at-risk and in-need” (US). And: “I looked at education and

experience first. Then health. Though there were many HIV-Positive, most were in middle or senior years, which I took as a sign of a disciplined personality” (US).

Conclusion

The number of politicians living with HIV ever elected to national office is extremely low. In the United States, Stewart McKinney represented Connecticut’s 4th District in the House of Representatives from 1971 until his death from AIDS in 1987. Other politicians with HIV served in state legislatures, including Jim Dressel (Michigan House of Representatives, 1979–1984), Larry McKeon (Illinois House of Representatives, 1997–2003), Corey Corbin (New Hampshire House of Representatives, 2000–2004), Thomas Duane (New York Senate, 1999–2012), Carl Sciorino (Massachusetts House of Representatives, 2005–2014), and Roger Montoya (New Mexico House of Representatives, 2021-). Several of them, however, did not disclose their status until after the election or until death. As noted, the number of politicians openly living with HIV in national office anywhere in the world remains extremely low, at three, in 2021.

This study reveals that voter negative attitudes likely contribute to the paucity of representation. Despite the massive advances in the treatment and understanding of HIV/AIDS, voters in the US, the UK and New Zealand still penalize candidates with HIV. The electoral penalties are strong – about 10–12 percentage points – and comparable to the disadvantages faced by other marginalized candidates, such as transgender individuals and Muslims. Widespread prejudice, the negative assessment of individuals considered responsible for their HIV status, and electability concerns drive voters’ unease with politicians with HIV. The patterns of vote penalty are also consistent and persistent across demographics and partisanship. The likelihood of *not* voting for a candidate with HIV is not conditioned by age, gender, religiosity, or ideology. As such, voter bias against HIV+ candidates is unusually pervasive.

The consistently negative attitudes toward candidates with HIV across subgroups of voters mark a key difference with the political fate of candidates from other marginalized groups such as sexual and gender minorities. For instance, partisanship, ideology and religiosity drive prejudice toward LGBTQ candidates, with conservative and religious voters less likely to support gay, lesbian and transgender politicians. Demographic characteristics also matter, with older voters and men being less supportive of LGBTQ candidates than younger voters and women (Haider-Markel 2010; Haider-Markel et al. 2017; Jones et al. 2018; Jones and Brewer 2019; Magni and Reynolds 2020). Such variation in electoral support, in contrast, does not emerge with regard to candidates with HIV.

This strong negative bias is partly explained by the fact that HIV/AIDS has for a long time been linked to marginalized communities who were already facing stigma, such as gay men, sex workers, and drug users. The large magnitude of penalties also reflects the degree to which the HIV community remains bio-medicalized, despite the fact that individuals with HIV today can live healthy lives, have life expectancy rates non significantly different from HIV-negative individuals, and cannot transmit the virus if they are undetectable. Many still see HIV/AIDS as an insidious threat,

have persistent misconceptions about virus transmission, and doubt the capacities of people living with HIV.

The limited visibility of politicians with HIV also helps explain the lack of support. Visibility increases familiarity with marginalized communities, which in turn can lessen prejudice and boosts the perceived electability of members of those communities. But if voters are not familiar with people with HIV, they may retreat to negative stereotypes. While a few celebrities have been open about their HIV+ status, recent surveys suggest that familiarity in the general population may actually be declining. While in the early 2000s 70% of Americans said they knew some or a lot about HIV/AIDS, ten years later the percentage had declined to 40%²⁹. As people living with HIV can better manage the virus without symptoms or visible manifestations, they become less visible and have the space to choose not to share their status. Medical advances have far outpaced declining prejudice, as negative attitudes toward and aversion to contact with people living with HIV remain strong and widespread.

Given all this, politicians have had good reason not to come out about their HIV status for a long time. Former MP and now Lord Chris Smith – first elected to the UK House of Commons in 1983 – allowed his HIV+ status to be revealed only in 2005, just before his retirement from the House, and only after a British newspaper had threatened to publish the fact. Recent years, however, have seen encouraging changes. British MP Lloyd Russell-Moyle won re-election in 2019 after coming out as HIV+. In the US, Corey Johnson won re-election and became Speaker of the New York City Council in 2018 as an openly HIV+ man. While these examples offer hope that an HIV+ status will not be an insurmountable barrier to public office in the future, we are still a long way from that state of grace.

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²⁹ Kaiser Family Foundation, 1 June 2011: <https://www.kff.org/report-section/hivaids-at-30-section-1/>.

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